

ABSTRACT OF THE DISCLOSURE

A semiconductor device manufacturing method having forming first and second insulating gate portions spaced from each other on a semiconductor substrate, selectively 5 implanting the first conductivity type impurity ions to the first gate electrode and a surface layer of the semiconductor substrate adjacent to the first insulating gate portion, selectively implanting the second conductivity type impurity ions to the second gate electrode and the surface 10 layer adjacent to the second insulating gate portion, after implanting the first and second conductivity types impurity ions, pre-annealing at a first substrate temperature, and after the pre-annealing, main-activating for the first and second types impurity ions at a second substrate 15 temperature higher than the first substrate temperature for a treatment period shorter than a period of the pre-annealing.